

Chico

"Dedicated to Public Service"

# THE RADIATOR

W6RHC  
IRLP #8170

www.gearsw6rhc.org

P.O.Box 202 Chico, CA 95927

June 2020 Newsletter

GEARS Founded August 13, 1939

The COVID-19 virus precautions continue requiring cancelation of most events. None of us like this situation, however we will do our best to keep members safe and healthy.

Field Day is June 27th & 28th. The Masonic Lodge hasn't advised if the outdoor location will be available. The alternative is to each operate from our home QTH. We will decide how we will proceed at our Board and General meetings.

Once again we held our GEARS general meeting online via Zoom video and phone conference. We will send you an email with the link.

Please be assured that we feel Zoom meetings are safe. The security issues that some users were concerned about have been resolved. Of course you can also participate by phone, which is as safe as any phone call.



We will also hold the June general and board meeting online. Watch your email for a link and phone number. The monthly breakfast is cancelled for the time being.

Tom W6JS has been holding VEC testing at outside locations. He will continue to offer tests by appointment. Please contact him at 514-9211 for more information.

June birthday wishes to Klaus Keil.

This is a great time to reach out to your fellow amateur radio friends via radio or phone. We can keep in touch even though we are isolated otherwise. Try to participate in the local nets too. Let's relax and do what we can to help one another. We will get through this current situation.

'73  
Jim Matthews K6EST  
[jiminchico@yahoo.com](mailto:jiminchico@yahoo.com)  
530-893-3314



Join GEARS on Facebook  
[www.facebook.com](https://www.facebook.com) For  
timely news and additional  
information.

## June 2020 Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 7pm GARS Net 8pm ARES Net	2	3	4 7pm PARS Net 7:30pm Simplex Net	5	6
7 8pm OARS Net	8 7pm GARS Net 8pm ARES Net	9 7:30pm GEARS Net	10	11 7pm PARS Net 7:30pm Simplex Net	12 7pm OARS Meeting TBD	13 GEARS Board Meeting online
14 8pm OARS Net	15 7pm GARS Net 8pm ARES Net	16 7:30pm GEARS Net	17	18 7pm PARS Net 7:30pm Simplex Net	19 7pm GEARS Meeting online	20
21 8pm OARS Net	22 7pm GARS Net 8pm ARES Net	23 7pm ARES meeting 7:30pm GEARS Net	24	25 7pm PARS Net 7:30pm Simplex Net	26	27 Field Day
28 Field Day	29 7pm GARS Net 8pm ARES Net	30 7:30pm GEARS Net				

**VEC Testing**, FCC License Exam available by appointment. For information or registration call Tom Rider, W6JS 514-9211

**Chico Breakfast** Cancelled until things settle down with the COVID-19 virus.

**GEARS Board Meeting** 2nd Saturday online.

**OARS Meeting** Second Friday of the month, TBD (To Be Determined)

**GARS Meeting** Second Thursday of the month, TBD

**Butte ARES Meeting** 3rd Tuesday, TBD Contact Dale Anderson, KK6EVX 826-3461 for more information.

**GEARS Meeting**, third Friday of the month, online till further notice pm, meeting at 7:00 pm.

**OARS Breakfast** 4th Saturday of the month TBD

### NETS:

OARS Club Net Sunday 8pm 146.655 Mhz - PL 136.5

GARS Club Net: Monday, 7:00 pm 147.105 MHz + PL 110.09

Butte ARES Net Mondays 8pm 145.290 MHz - PL 110.9

Yuba Sutter Club Net Monday 7pm 146.085 MHz + PL 127.3

GEARS Club Net Tuesdays 7:30 PM 146.850 MHz - PL 110.9

PARS Club Net Thursday 7pm 145.290 - PL 110.9

Simplex Net Thursday 7:30 p.m. 146.52 no tone

Yuba Sutter ARES Net Thursdays 7pm 146.085 MHz + PL 127.3

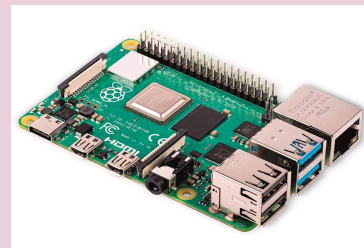
Sacramento Valley Traffic Net Nightly 9:00 PM 146.850 MHz - PL 110.9

## Slice of Pi

Our June online meeting Raspberry Pi tutorials will continue.

Please let us know your interests in this computer and what lessons or applications you would like to hear.

If you have any questions or comments contact Rick Hubbard KI6VOS at [rick.hubbard.email@gmail.com](mailto:rick.hubbard.email@gmail.com).



## Balloons with APRS Payloads to Race Across North America in Educational Challenge

It all began when Amateur Radio on the International Space Station (ARISS) educator Joanne Michael, KM6BWB — a science coach at the Wiseburn Unified School District in Los Angeles — challenged another ARISS partner group to a mid-altitude, cross-continent balloon race. Michael has led her students in several balloon launch attempts from the Los Angeles area each year.



Given the disruption caused to schools by the COVID-19 pandemic, Michael wanted to shake things up a bit and give students worldwide a unique distance-learning treat that could safely be accomplished during the pandemic. She challenged Ted Tagami, KK6UUQ, from ARISS partner Magnitude.io to a mid-altitude cross-continent balloon race, and Tagami accepted the challenge. Tagami plans to launch his balloon from Oakland, California. ARISS partner ISS Above inventor Liam Kennedy, KN6EQU, of Pasadena, California, got wind of the idea and asked to participate too.

ARISS, Magnitude.io, and ISS Above are ISS National Lab Space Station Explorer (SSE) partners that work to inspire, engage, and educate students in science technology engineering, arts and mathematics (STEAM) topics and to pursue careers in those fields.

The story caught fire on social media, inspiring one teacher to figure out how to initiate a launch from her school. “Let’s get planning and get your thoughts and ideas and let’s make this happen for the students,” she said in a post.

Once the balloons are airborne, students can track each balloon’s location, altitude, and temperature, which are fed automatically via the Automatic Packet Reporting System (APRS).

“Educators and parents around the globe can excite at-home youth with this initiative,” ARISS said in announcing the challenge. “Students can tally and track the states each balloon travels through and plot altitude versus temperature [and other parameters). Also, by researching weather patterns, students can make assumptions from their own data. This could include speed variations due to weather. They also can predict each balloon’s flight path and when they might cross the finish line.”

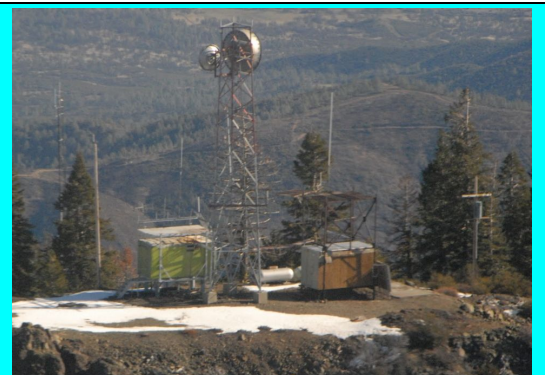
For more information on the balloon launch, lesson plans, and the livestream video link visit the [ARISS Mid-Altitude Balloon Race page](#).

From QRZNow.com

## Mt. St. John

Our new repeater on Mt. St. John has been having some issues the last few weeks. We are experiencing some type of receive issues, with the signals sounding very rough.

Michael Favor N6FAV is working on the problem and is planning to go up in June.



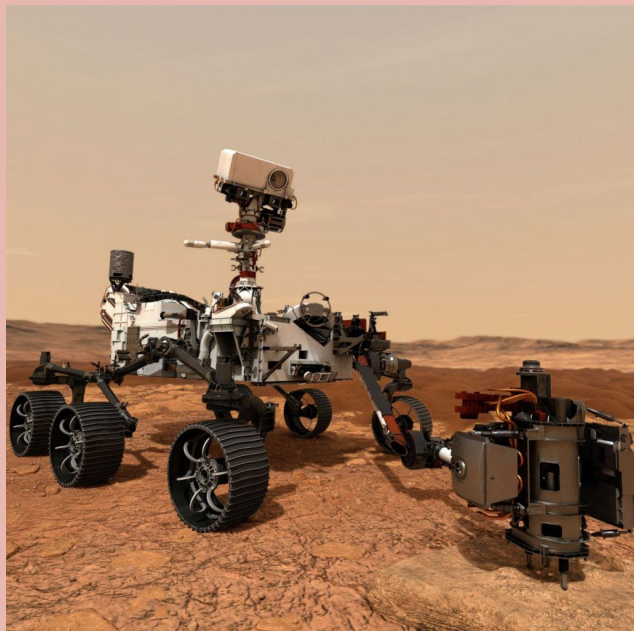


## Morse Code Makes its Way to Mars

By Kim Klimas

Messages aren't just for bottles these days, and the one inscribed in Morse code on the license plate of NASA's new Mars rover, Perseverance, will make its way much farther than the distance of an arm's throw—with Ham-friendly lingo in tow.

The \$2 billion rover, built at the Jet Propulsion Laboratory in California, is readying itself (with the help of NASA engineers) for a July launch that will initiate a seven-month voyage to the red planet to search for signs of past microbial life. Perseverance will collect rock and soil samples that will be returned to Earth and analyzed in NASA's state-of-the-art facilities.



The Rover, originally known by the unassuming title of Mars 2020, received its moniker as the result of a nationwide “Name the Rover” essay contest open to K-12 students. More than 10.9 million entries were received. In January, only nine entries remained for the 4,700 volunteer judges to review. Perseverance, suggested by seventh-grader Alexander Mather, won out (you can hear his essay here) and the rest is history—in the making.

Perseverance takes with it the names of the more than 10.9 million contest participants inscribed in minuscule type on three metal microchips on its rear license plate, as well as essays from the top 155 finalists—and the rover's carrying capacity for messages of significance doesn't stop there.

Twitter came alive recently when fans of the rover noticed a hidden message concealed in the diagram of Earth, Mars, and the sun etched inconspicuously on the rover's license plate. The dots and dashes of the image double in purpose as a Morse code message that reads, “Explore as One.” It's not the first time NASA—known for cutting-edge communication, science, and technology—has applied the old-school mode of communication to make its mark in outer space.

When engineers at the Jet Propulsion Lab, where Perseverance and its predecessor Curiosity were built, received orders to add standard holes to Curiosity's six wheels to avoid issues with dirt accumulation that had doomed prior rovers, they rebelled against NASA's request and instead added these—tires with a series of Morse code dots and dashes that imprinted the initials JPL (the laboratory's initials) onto Martian dirt as the rover explored the planet.

For more information on the mission, visit <https://mars.nasa.gov/mars2020/>



### GEARS Century Club Members

Rick Hubbard  
Bennett Laskey

*Thank you very much for your extra support*

## Solar Cycle 25 Update

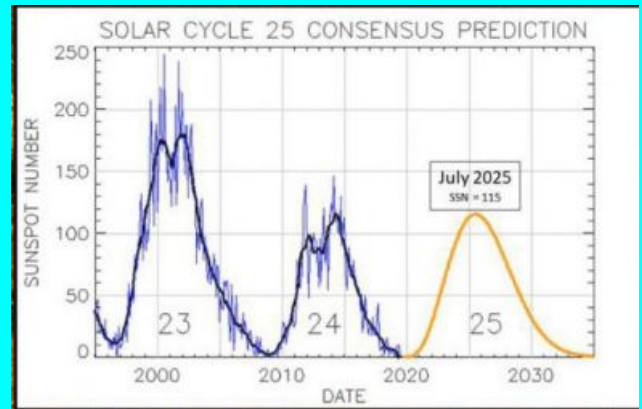
By Wayne KE8JFW

What does Solar Cycle 25 have in store? While no one can know for sure, here's the latest news from the National Weather Service.

Based on results of NOAA's Solar Cycle 25 Prediction Panel, the Space Weather Prediction Center has forecasted a solar maximum between November 2024 and March 2026. There is general agreement among the science community that Cycle 25 will likely be within plus or minus 20 percent of Cycle 24 and solar maximum will happen between 2024 and 2027. How accurate is this forecast? Only time will tell. For some insight, read this blog which discusses what was predicted 11 years ago for Solar Cycle 24.

So now what? While so many of us are spending lots of time at home, it's a good opportunity to study up on propagation. Here's a great article from blogger Ward Silver, N0AX, on "[Long-Duration HF Contesting Tips](#)," which includes links to useful propagation prediction tools.

From OnAllBands.com



## Field Day

The first Field Day was in June 1933. QST announced that the second Saturday in June, for a period of 27 hours, starting at 4 pm local time, that hams would go into the "field" and set up portable stations.

W1BDI F.E. Handy said: "The real object of this contest is to test 'portables' wherever they may be available.... If successful, we want to make it an annual affair."

The scoring of that first contest was each QSO with fixed stations will count 1 point, contacts with other portables count 2 points, and DX contacts count 3 points. Multiply QSO points by the total number of ARRL sections, plus countries worked.

Field Day was a big success from the start. It has continued every year, except 1942-1945 during WWII.

However with the COVID-19 pandemic Field Day will be different this year. Many clubs have cancelled the local field day group events all together.

Since this situation is changing rapidly, GEARS is considering all options and will discuss our plans at the Board and General meeting. If you are interested, please call into the general meeting on June 19th. The call in number is the same as last month: 669-900-9128 (long distance), Meeting ID: 911 9284 8940, Password: 146850. Social hour at 6pm, meeting starts at 7pm.

For more information and updates to the rules, visit <http://www.arrl.org/field-day>



## One Radio Amateur Aboard Historic SpaceX Launch

On Saturday May 30th. NASA astronauts Bob Behnken, KE5GGX (left), and Doug Hurley (right) made US space history, as human spaceflight returns to the US for the first time in almost a decade. Behnken and Hurley were on board a SpaceX Dragon spacecraft for the "test flight" powered by a Falcon 9 launch vehicle, and docked with the International Space Station (ISS) on Sunday May 31st.

Aboard the ISS American astronauts use the call sign NA1SS. You can hear them at 145.80 Mhz when in range. For more information visit

<https://www.ariss.org/contact-the-iss.html>

To locate the ISS visit [www.isstracker.com](http://www.isstracker.com)



### Club Officers:

President.....Jim Matthews, K6EST  
Vice-President.....Kent Hastings, WA6ZFY  
Secretary.....Susan Check, KE6LTY  
Treasurer.....Kathy Favor, K6FAV  
Director.....Rick Hubbard, KI6VOS  
Director.....Dale Anderson, KK6EVX  
Director.....Bennett Laskey, K6CEL  
Past President.....Tom Rider, W6JS  
VEC.....Tom Rider, W6JS



Everytime I log a Chinese station, an hour later I want to log another.



Very ingenious. But there are a lot of things I need more than an AM/FM toaster.

Both from Popular Electronics 1968